Syllabus
MSNE 615 001 - Safety breach case studies
Spring 2017

Instructor information
Instructor: Akos Kukovecz, visiting lecturer
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Office hours: W 1:00 pm – 3:00pm or by appointment

Course Identification
Course Number: MSNE 615 001 (CRN: 22222)
Classroom: TBA
Class hours: TBA. The full term will be compressed into 2 weeks of daily late afternoon lectures in the April 3-14, 2017 period.

Course description/overview
Prerequisite: None.
Who should take the course: all science or engineering graduate or undergraduate students including freshmen.

The course will introduce the most important process plant safety concepts and design techniques for the early identification and minimization of operational hazards. A broad selection of historical and recent industrial accident cases will be discussed and analyzed. What can we learn, what are the best practices for loss prevention? Correlations between material design/selection and instrument failure will be analyzed, and the foreseeable safety threats related to the use of nanocomposite materials will be discussed.
This is a highly interdisciplinary course that is usually taken by students majoring in chemistry, physics, engineering and environmental studies at the instructors's home university. However, students in IT, biology and earth sciences have also completed the course successfully and enriched the discussions with their unique points of view.

There is no textbook, students will select and I will provide reading assignments in class. Recommended reading material: books by Trevor A. Kletz and completed investigation case studies published by the U.S. Chemical Safety Board (www.csb.gov)

No hard copy submissions/handouts, e-mail and Owl space documents only!

Class attendance is recommended. Some exam material in the lectures may not be present in reading materials.

Evaluation: The final grade is based on the understanding of the topic and forming the final document. The grade has the following components: 100% based on the term paper. The deadline for submitting the term paper is 2 weeks after the end of the lecture. The term paper needs to be submitted electronically in PDF format, by email to the instructor.